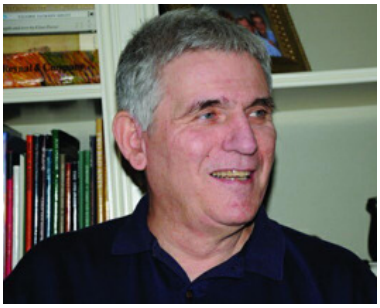
NEW RESEARCH ON STATINS MAY GIVE ANSWERS FOR POLIOS



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BA, MA, Professor Emeritus in Microbiology and Chemistry, a retired professor of micro-biology and chemistry from Connecticut USA is a polio survivor himself. Articles he has written on post polio can be found at his website **www.angelfire.com/mi/nccc**

Quotes below from some of his most recent writings on statins may help us to understand this new research.

"As polio survivors, the question is how can we utilize these statin medications, to lower cholesterol, without worrying about adverse muscle effects?

If one reads current medical literature addressing statin drugs to try to find out what it is about statins that causes the adverse muscle effects one will invariably find *"It is not known"*. The probable answer to the question of cause has been worked out simultaneously in Japan, Harvard, and at Beth Israel Hospital in Boston, Massachusetts. The **biological roots of statin muscle damage are similar,** coincidentally, **to the atrophy we experience with polio.**

Researcher's have performed a series of elegant experiments which reveal how statins produce this muscle damage or myopathy in some patients.

Because of the new knowledge countermeasures are already being planned to develop agents which will eliminate these troublesome muscle problems due to statin therapy. However, Dr. Lecker of Harvard, a leader in this group of researchers, couldn't provide an answer regarding a medicine or substance one can take to eliminate the possibility of myopathy resulting from statin drug therapy.

Instead he recommended a **trial of Co-enzyme Q10**, since this important compound has multiple functions in energy production and **is decreased significantly by statins,** as is cholesterol. Co-Q10 is not only used extensively by the processes leading to myopathy, but it is reduced in amount during the same process that lowers cholesterol concentration. Statins themselves lower Co-Q10 blood concentration.

The biochemistry of muscle damage is complex. The aforementioned researcher's leading explanation of this damage is that **a gene within our DNA called atrogen-1 is turned on by statins**. **Age also turns it on.** Diseases like **cancer, infection and polio can turn it on**. Once it is on it provides the information for the muscle fibre to produce an enzyme called Ubiquitin ligase (Co-enzyme Q10 ligase).

This molecule binds with several Co-enzyme Q10 molecules until the entire structure has a shape that allows it to snatch up small repair proteins in the muscle. Once these proteins are bound they are deposited into a tiny body called a proteosome, which breaks up these repair proteins into smaller pieces.

This effectively **removes the ability of the muscle to repair itself,** and atrophy **(breakdown) of the muscle fibre occurs.** Exercise inhibits this entire process and more repairs can be made but if the exercise is too intense, too frequent, or too long, the process is stimulated again.

Such intense exercise in the presence of a statin turns on atrogen-1 much more readily in most people. **So polios particularly, should be careful with extreme vigorous exercise while on a statin.**

When drugs like **Lipitor, Zocor, Crestor, Mevacor** among others, are used, they slow the speed of cholesterol formation, and the amount of cholesterol in the blood and muscles decreases. Geranylgeranyl pyrophosphate, the chemical responsible for preventing muscle problems, also decreases, and it does not function as it normally does. **This decrease is very likely the cause of muscle-related problems.**

I think physicians should probably, if they do not already, take into account other medications that a patient is using when prescribing a statin drug.

Because **Lipitor**, for example, **is broken down in the liver by a different chemical than Crestor** or some of the other statins. Other medications are also broken down in the liver by other chemicals. **If medications, like the heart drug amiodarone or the hypertension drugs called calcium channel blockers, are taken together with a particular statin like Lipitor, the chemical that breaks down both drugs is the same, so the statin will not be broken down as quickly and will increase in the blood. This may cause muscle soreness.**

Some medication interactions are stronger than others. One particularly powerful interaction is with **anti-fungal drugs** called azoles. Using them while using statins **can increase the amount of statin in the blood significantly and increase the probability of muscle problems.**

Since there are several different statins that use different liver decomposition chemicals, patients should use a statin that is processed by a chemical in the liver that is not being used by another medication they are taking."

"Do we need Cholesterol and what increases our levels??"

Despite all the hype around about the need for statins to lower cholesterol and the push by drug companies and the media for everyone to take statins to prevent heart disease, is there really another side to all this.

Two sources I have been looking at suggest a different perspective we could be looking at re cholesterol. Here are some quotes from The Weston Price Foundation on the internet **(see "Cholesterol: Friend Or Foe?" by Natasha Campbell-McBride, MD 2008-May-04 and "Dangers of Statin Drugs" by Sally Fallon and Mary Enig)**

"Saturated fats and cholesterol make the membranes of the cells firm - without them the cells would become flabby and fluid. If we humans didn't have cholesterol and saturated fats in the membranes of our cells, we would look like giant worms or slugs.

Without cholesterol and saturated fats, our cells would not be able to communicate with each other or to transport various molecules into and out of the cell. As a result, our bodies would not be able to function the way they do. The human brain is particularly rich in cholesterol: around 25 percent of all body cholesterol is accounted for by the brain. Every cell and every structure in the brain and the rest of **our nervous system needs cholesterol,** not only to build itself but also to accomplish its many functions.

When we eat more cholesterol, the body produces less; when we eat less cholesterol, the body produces more.

As a raw material for making cholesterol the body can use carbohydrates, proteins and fats, which means that your pasta and bread can be used for making cholesterol in the body. It has been estimated that, in an average person, about 85 percent of blood cholesterol is produced by the body, while only 15 percent comes from food. So, even if you religiously follow a completely cholesterol-free diet, you will still have a lot of cholesterol in your body. However, cholesterol-lowering drugs are a completely different matter! They interfere with the body's ability to produce cholesterol, and hence they do reduce the amount of cholesterol available for the body to use.

Every cell membrane in our body contains cholesterol because cholesterol is what makes our cells waterproof - without cholesterol we could not have a different biochemistry on the inside and the outside of the cell.

Cholesterol is needed for nerve function. Cholesterol is vital to proper neurological function. It plays a key role in the formation of memory and the uptake of hormones in the brain, including serotonin, the body's feel-good chemical. When cholesterol levels drop too low, the serotonin receptors cannot work. Cholesterol is a major component of the brain, much of it in the myelin sheaths that insulate nerve cells and in the synapses that transmit nerve impulses.

Here are some quotes from the book
"Your Body's Many Cries for Water"
by Dr F Batmanghelidj MD 2008

"**Excess cholesterol formation is the result of dehydration.** It is dehydration that causes many different diseases not the level of cholesterol in the circulating blood. It is therefore more prudent to pay attention to our daily water intake rather than the foods we eat.

Water is the adhesive that holds the cells together. The 2 layers are separate and the space is used as a 'waterway' for enzyme activity. **In a dehydrated membrane, cholesterol is manufactured to stick the cells together and to prevent further loss of water from inside the cell.** The 'waterway' is also obstructed in dehydrated cells. Cholesterol production is a part of the cell survival system.

Increased water intake lowers cholesterol levels.

Cholesterol serves as a **"water-proofing bandage"** on the abrasions and tears in the arterial walls that get damaged when the blood becomes concentrated and acidic **as a result of dehydration** and low urine output (dark and acidic urine).

High cholesterol levels are an indicator of early drought management by the body."